

## Abstract

### Aircraft Assembly Tool and Method of Manufacturing the Same

- 5        This invention provides a method of producing an aircraft assembly tool for supporting an aircraft component comprising:
- 10        a) determining a plurality of predetermined positions and orientations in space at which the component should be supported;
- 15        b) designing a fixture frame (12) configured to provide support at predetermined locations of the frame associated with said predetermined positions;
- 20        c) constructing the fixture frame by selecting elongate members (14) having predetermined lengths and connecting the elongate members together by means of releasable fastening means (32);
- 25        d) constructing a plurality of pick-up devices (20), each having a receiving element (76) for carrying the component, by selecting further elongate members (66) having predetermined lengths and connecting the further elongate members together by means of clamping elements (68) adapted selectively to allow at least three degrees of freedom of movement of each receiving element along at least two orthogonal axes and around at least one axis coplanar with the orthogonal axes;
- 30        e) mounting the pick-up devices to the fixture frame at the predetermined locations; and
- f) moving each receiving element about/around the orthogonal axes to align the receiving element with a respective predetermined position and orientation.

The invention further provides an aircraft assembly tool resulting from such a method.

(Figure 1)

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